

IN THE CLAIMS

Please cancel withdrawn claims 1-22 and 59-82, amend claims 23, 30, 35, 41, 48 and 53 and add new claims 83-139 as follows:

1-22. (CANCELLED)

23. (CURRENTLY AMENDED) A system for delivering medication, comprising:  
an infusion pump; and  
a control system for controlling medication delivery by the infusion pump;  
wherein the control system includes a plurality of medication delivery profiles and a plurality of suspend functions capable of separately suspending the plurality of medication delivery profiles;  
and  
wherein the system for delivering medication is compact and adapted to be carried by a user.

24. (ORIGINAL) The system of claim 23, wherein controlling medication delivery by the pump includes using two or more wave profiles and wherein the control system includes a suspend function for separately suspending each of the two or more wave profiles.

25. (ORIGINAL) The system of claim 24, wherein the control system further includes a resume function for selectively restarting each of the more than one wave profile.

26. (ORIGINAL) The system of claim 24, wherein the control system further includes a compensating function for delivering a compensating bolus to account for any suspended wave profile.

27. (ORIGINAL) The system of claim 24, wherein the suspend function further includes a full suspend function for directly suspending all delivery of medication.

28. (ORIGINAL) The system of claim 24, wherein the more than one wave profiles are selected from the group including a square wave bolus profile, a dual wave bolus profile and a basal profile.
29. (ORIGINAL) The system of claim 23, wherein the suspend function includes a menu system for selecting a period of time for temporarily suspending medication delivery by the infusion pump.
30. (CURRENTLY AMENDED) The system of claim 29, wherein the menu system includes an array a plurality of fixed periods from which to select as the period of time for temporarily suspending medication delivery.
31. (ORIGINAL) The system of claim 29, wherein the menu system includes one or more increment periods increment the period of time for temporarily suspending medication delivery.
32. (ORIGINAL) The system of claim 29, wherein the menu system includes a specified time of day to select as an end of the period of time for temporarily suspending medication delivery.
33. (ORIGINAL) The system of claim 29, wherein after the period of time for temporarily suspending medication delivery by the infusion pump has transpired the pump resumes medication delivery.
34. (ORIGINAL) The system of claim 23, wherein the suspend function includes a block function for suspending delivery of medication after a potentially harmful amount of medication is requested by a user and a warning to the user of the potentially harmful amount of medication.
35. (CURRENTLY AMENDED) The system of claim 34, wherein the potentially harmful amount of medication is an unusually large bolus.

36. (ORIGINAL) The system of claim 34, wherein the potentially harmfully amount of medication is a bolus requested too soon after a previous bolus is delivered.
37. (ORIGINAL) The system of claim 34, wherein the potentially harmfully amount of medication is too low a total medication dose for the day.
38. (ORIGINAL) The system of claim 34, wherein the block function is triggered after a medication measurement integrated over an integration period exceeds a target value.
39. (ORIGINAL) The system of claim 38, wherein the block function is alternately triggered because a second medication measurement integrated over a simultaneous and overlapping integration period exceeds the target value.
40. (ORIGINAL) The system of claim 38, wherein the integration period is subdivided into a plurality of subperiods and each of the plurality of subperiods is associated with a subtotal representing medication delivered and an oldest subtotal of the subperiods is replaced by a newest subtotal of the subperiods.
41. (CURRENTLY AMENDED) A method of delivering medication, comprising:  
controlling medication delivery by an infusion pump with a control system, wherein the control system includes a plurality of medication delivery profiles and a plurality of suspend functions capable of separately suspending the plurality of medication delivery profiles; and  
temporarily suspending medication delivery by the infusion pump with a suspend function of the control system; and  
wherein the infusion pump with the control system used in the method of delivering medication is compact and adapted to be carried by a user.
42. (ORIGINAL) The method of claim 41, wherein the step of controlling medication delivery by the pump includes using two or more wave profiles and wherein the control system includes a suspend function for separately suspending each of the two or more wave profiles.

43. (ORIGINAL) The method of claim 42, further including selectively restarting each of the more than one wave profile with a resume function of the control system.
44. (ORIGINAL) The method of claim 42, further including delivering a compensating bolus to account for any suspended wave profile with a compensating function of the control system.
45. (ORIGINAL) The method of claim 42, wherein the suspend function further includes a full suspend function for directly suspending all medication delivery.
46. (ORIGINAL) The method of claim 42, wherein the more than one wave profiles are selected from the group including a square wave bolus profile, a dual wave bolus profile and a basal profile.
47. (ORIGINAL) The method of claim 41, wherein the suspend function includes a menu system for selecting a period of time for temporarily suspending medication delivery by the infusion pump.
48. (CURRENTLY AMENDED) The method of claim 47, wherein the menu system includes ~~an array a plurality~~ of fixed periods from which to select as the period of time for temporarily suspending medication delivery.
49. (ORIGINAL) The method of claim 47, wherein the menu system includes one or more increment periods increment the period of time for temporarily suspending medication delivery.
50. (ORIGINAL) The method of claim 47, wherein the menu system includes a specified time of day to select as an end of the period of time for temporarily suspending medication delivery.

51. (ORIGINAL) The method of claim 47, wherein after the period of time for temporarily suspending medication delivery by the infusion pump has transpired the pump resumes medication delivery.
52. (ORIGINAL) The method of claim 41, wherein the step of temporarily suspending includes suspending delivery of medication with a block function of the control system after a potentially harmful amount of medication is requested by a user and a warning to the user of the potentially harmful amount of medication.
53. (CURRENTLY AMENDED) The method of claim 52, wherein the potentially harmfully amount of medication is ~~an unusually large bolus~~.
54. (ORIGINAL) The method of claim 52, wherein the potentially harmfully amount of medication is a bolus requested too soon after a previous bolus is delivered.
55. (ORIGINAL) The method of claim 52, wherein the potentially harmfully amount of medication is too low a total medication dose for the day.
56. (ORIGINAL) The method of claim 52, wherein the block function is triggered after a medication measurement integrated over an integration period exceeds a target value.
57. (ORIGINAL) The method of claim 56, wherein the block function is alternately triggered because a second medication measurement integrated over a simultaneous and overlapping integration period exceeds the target value.
58. (ORIGINAL) The method of claim 56, wherein the integration period is subdivided into a plurality of subperiods and each of the plurality of subperiods is associated with a subtotal representing medication delivered and an oldest subtotal of the subperiods is replaced by a newest subtotal of the subperiods.

59-82. (CANCELLED)

83. (NEW) The system of claim 23, wherein the infusion pump includes a reservoir for containing the medication, a drive mechanism to deliver the medication from the reservoir, a processor to control the control system, a memory to store the plurality of medication delivery profiles, an input device to allow a patient to command the infusion pump and a housing that houses at least a portion of the reservoir, at least a portion of the drive mechanism, the processor, the memory and at least a portion of the input device, wherein the control system controls medication delivery from the reservoir in accordance with the plurality of medication delivery profiles, such that two or more of the plurality of medication delivery profiles can be used to deliver medication at the same time.

84. (NEW) The system of claim 83, wherein at least one of the plurality of suspend functions may be used independently of at least one of the other of the plurality of suspend functions, such that medication delivery continues from the reservoir in accordance with at least one of the plurality of medication delivery profiles.

85. (NEW) The system of claim 23, wherein the infusion pump includes a reservoir for containing the medication, a drive mechanism to deliver the medication from the reservoir, a processor to control the control system, a memory to store the plurality of medication delivery profiles, an input device to allow a patient to command the infusion pump and a housing that houses at least a portion of the reservoir, at least a portion of the drive mechanism, the processor, the memory and at least a portion of the input device, wherein the control system controls medication delivery from the reservoir in accordance with the plurality of medication delivery profiles, such that two or more of the plurality of medication delivery profiles can be used to deliver medication at the same time, and wherein at least one of the plurality of suspend functions may be used independently of at least one of the other of the plurality of suspend functions, such that medication delivery continues from the reservoir in accordance with at least one of the plurality of medication delivery profiles.

86. (NEW) The method of claim 41, wherein the infusion pump includes a reservoir for containing the medication, a drive mechanism to deliver the medication from the reservoir, a processor to control the control system, a memory to store the plurality of medication delivery profiles, an input device to allow a patient to command the infusion pump and a housing that houses at least a portion of the reservoir, at least a portion of the drive mechanism, the processor, the memory and at least a portion of the input device, wherein the control system controls medication delivery from the reservoir in accordance with the plurality of medication delivery profiles, such that two or more of the plurality of medication delivery profiles can be used to deliver medication at the same time.

87. (NEW) The method of claim 86, wherein at least one of the plurality of suspend functions may be used independently of at least one of the other of the plurality of suspend functions, such that medication delivery continues from the reservoir in accordance with at least one of the plurality of medication delivery profiles.

88. (NEW) The method of claim 41, wherein the infusion pump includes a reservoir for containing the medication, a drive mechanism to deliver the medication from the reservoir, a processor to control the control system, a memory to store the plurality of medication delivery profiles, an input device to allow a patient to command the infusion pump and a housing that houses at least a portion of the reservoir, at least a portion of the drive mechanism, the processor, the memory and at least a portion of the input device, wherein the control system controls medication delivery from the reservoir in accordance with the plurality of medication delivery profiles, such that two or more of the plurality of medication delivery profiles can be used to deliver medication at the same time, and wherein at least one of the plurality of suspend functions may be used independently of at least one of the other of the plurality of suspend functions, such that medication delivery continues from the reservoir in accordance with at least one of the plurality of medication delivery profiles.

89. (NEW) An infusion device for delivering a fluid from a reservoir to the body of a patient, the infusion device comprising:

a drive mechanism to deliver the fluid from the reservoir to the body of the patient;  
a processor including a control system for controlling delivery of the fluid;  
a memory to store two or more medication delivery profiles associated with the reservoir;  
an input device to allow the patient to command the processor; and  
  
a housing that houses at least a portion of the reservoir, at least a portion of the drive mechanism, the processor, the memory and at least a portion of the input device;  
wherein the control system controls fluid delivery from the reservoir in accordance with the two or more medication delivery profiles, such that the two or more medication delivery profiles can be used to deliver fluid at the same time,

wherein the control system includes at least two suspend functions capable of separately suspending at least one of the two or more medication delivery profiles, such that fluid delivery continues in accordance with at least one of the two or more medication delivery profiles,  
wherein each of the at least two suspend functions may be used independently of the other of the at least two suspend functions, and

wherein the housing is compact and adapted to be carried by the user.

90. (NEW) The infusion device of claim 89, wherein the control system further includes a resume function for selectively restarting each of the two or more medication delivery profiles.

91. (NEW) The infusion device of claim 89, wherein the control system further includes a compensating function for delivering a compensating bolus to account for any suspended medication delivery profile.

92. (NEW) The infusion device of claim 89, wherein the at least two suspend functions further include a full suspend function for directly suspending all fluid delivery.

93. (NEW) The infusion device of claim 89, wherein the two or more medication delivery profiles are selected from the group including a square wave bolus profile, a dual wave bolus profile and a basal profile.

94. (NEW) The infusion device of claim 89, wherein the at least two suspend functions include a menu system for selecting a period of time for temporarily suspending fluid delivery by the infusion device.

95. (NEW) The infusion device of claim 94, wherein the menu system includes a plurality of fixed periods from which to select as the period of time for temporarily suspending fluid delivery.

96. (NEW) The infusion device of claim 94, wherein the menu system includes one or more increment periods to increment the period of time for temporarily suspending fluid delivery.

97. (NEW) The infusion device of claim 94, wherein the menu system includes a specified time of day to select as an end of the period of time for temporarily suspending fluid delivery.

98. (NEW) The infusion device of claim 94, wherein after the period of time for temporarily suspending fluid delivery by the infusion device has transpired the infusion device resumes fluid delivery.

99. (NEW) The infusion device of claim 89, wherein the at least two suspend functions include a block function for suspending delivery of the fluid after a potentially harmful amount of fluid is requested by a user and a warning to the user of the potentially harmful amount of fluid.

100. (NEW) The infusion device of claim 99, wherein the potentially harmful amount of fluid is a bolus.

101. (NEW) The infusion device of claim 99, wherein the potentially harmful amount of fluid is a bolus requested too soon after a previous bolus is delivered.

102. (NEW) The infusion device of claim 99, wherein the potentially harmful amount of fluid is too low a total fluid dose for the day.

103. (NEW) The infusion device of claim 99, wherein the block function is triggered after a fluid measurement integrated over an integration period exceeds a target value.

104. (NEW) The infusion device of claim 103, wherein the block function is alternately triggered because a second fluid measurement integrated over a simultaneous and overlapping integration period exceeds the target value.

105. (NEW) The infusion device of claim 103, wherein the integration period is subdivided into a plurality of subperiods and each of the plurality of subperiods is associated with a subtotal representing the fluid delivered and an oldest subtotal of the subperiods is replaced by a newest subtotal of the subperiods.

106. (NEW) An infusion device for delivering a fluid from a reservoir to the body of a patient, the infusion device comprising:

a drive mechanism to deliver the fluid from the reservoir to the body of the patient;  
a processor including a control system for controlling delivery of the fluid;  
a memory to store at least one basal rate profile and at least one bolus profile associated with the reservoir;  
an input device to allow the patient to command the processor; and

a housing that houses at least a portion of the reservoir, at least a portion of the drive mechanism, the processor, the memory and at least a portion of the input device;  
wherein the control system controls fluid delivery from the reservoir in accordance with the at least one basal rate profile and the at least one bolus profile, such that the at least one basal rate profile and the at least one bolus profile can be used to deliver fluid at the same time,  
wherein the control system includes at least two suspend functions capable of separately suspending at least one of the at least one basal rate profile and the at least one bolus profile,  
wherein each of the at least two suspend functions may be used independently of the other of the at least two suspend functions, and

wherein the housing is compact and adapted to be carried by the user.

107. (NEW) The infusion device of claim 106, wherein the control system further includes a resume function for selectively restarting each of the at least one basal rate profile and the at least one bolus profile.

108. (NEW) The infusion device of claim 106, wherein the control system further includes a compensating function for delivering a compensating bolus to account for any suspended at least one basal rate profile and at least one bolus profile.

109. (NEW) The infusion device of claim 106, wherein the at least two suspend functions further include a full suspend function for directly suspending all fluid delivery.

110. (NEW) The infusion device of claim 106, wherein the at least one basal rate profile and the at least one bolus profile are selected from the group including a square wave bolus profile, a dual wave bolus profile and a basal profile.

111. (NEW) The infusion device of claim 106, wherein the at least two suspend functions include a menu system for selecting a period of time for temporarily suspending fluid delivery by the infusion device.

112. (NEW) The infusion device of claim 111 wherein the menu system includes a plurality of fixed periods from which to select as the period of time for temporarily suspending fluid delivery.

113. (NEW) The infusion device of claim 111, wherein the menu system includes one or more increment periods to increment the period of time for temporarily suspending fluid delivery.

114. (NEW) The infusion device of claim 111, whrcin the menu system includes a specified time of day to select as an end of the period of time for temporarily suspending fluid delivery.

115. (NEW) The infusion device of claim 111, wherein after the period of time for temporarily suspending fluid delivery by the infusion device has transpired the infusion device resumes fluid delivery.

116. (NEW) The infusion device of claim 106, wherein the at least two suspend functions include a block function for suspending delivery of the fluid after a potentially harmful amount of fluid is requested by a user and a warning to the user of the potentially harmful amount of fluid.

117. (NEW) The infusion device of claim 116, wherein the potentially harmful amount of fluid is a bolus.

118. (NEW) The infusion device of claim 116, wherein the potentially harmful amount of fluid is a bolus requested too soon after a previous bolus is delivered.

119. (NEW) The infusion device of claim 116, wherein the potentially harmful amount of fluid is too low a total fluid dose for the day.

120. (NEW) The infusion device of claim 116, wherein the block function is triggered after a fluid measurement integrated over an integration period exceeds a target value.

121. (NEW) The infusion device of claim 120, wherein the block function is alternately triggered because a second fluid measurement integrated over a simultaneous and overlapping integration period exceeds the target value.

122. (NEW) The infusion device of claim 120, wherein the integration period is subdivided into a plurality of subperiods and each of the plurality of subperiods is associated with a subtotal representing the fluid delivered and an oldest subtotal of the subperiods is replaced by a newest subtotal of the subperiods.

123. (NEW) An infusion device for delivering a fluid from a reservoir to the body of a patient, the infusion device comprising:

a drive mechanism to deliver the fluid from the reservoir to the body of the patient;  
a processor including a control system for controlling delivery of the fluid;  
a memory to store two or more medication delivery profiles;  
an input device to allow the patient to command the processor; and

a housing that houses at least a portion of the reservoir, at least a portion of the drive mechanism, the processor, the memory and at least a portion of the input device;

wherein the two or more medication delivery profiles include at least one basal rate profile and at least one bolus profile,

wherein the control system controls fluid delivery from the reservoir in accordance with the at least one basal rate profile and the at least one bolus profile, such that the at least one basal rate profile and the at least one bolus profile can be used to deliver fluid at the same time,

wherein the control system includes at least two suspend functions capable of separately suspending at least one of the two or more medication delivery profiles, such that fluid delivery continues in accordance with at least one of the two or more medication delivery profiles,

wherein each of the at least two suspend functions may be used independently of the other of the at least two suspend functions, and

wherein the housing is compact and adapted to be carried by the user.

124. (NEW) The infusion device of claim 123, wherein the control system further includes a resume function for selectively restarting each of the two or more medication delivery profiles.

125. (NEW) The infusion device of claim 123, wherein the control system further includes a compensating function for delivering a compensating bolus to account for any suspended medication delivery profiles.

126. (NEW) The infusion device of claim 123, wherein the at least two suspend functions include a full suspend function for directly suspending all fluid delivery.

127. (NEW) The infusion device of claim 123, wherein the two or more medication delivery profiles are selected from the group including a square wave bolus profile, a dual wave bolus profile and a basal profile.

128. (NEW) The infusion device of claim 123, wherein the at least two suspend functions include a menu system for selecting a period of time for temporarily suspending fluid delivery by the infusion device.

129. (NEW) The infusion device of claim 128, wherein the menu system includes a plurality of fixed periods from which to select as the period of time for temporarily suspending fluid delivery.

130. (NEW) The infusion device of claim 128, wherein the menu system includes one or more increment periods to increment the period of time for temporarily suspending fluid delivery.

131. (NEW) The infusion device of claim 128, wherein the menu system includes a specified time of day to select as an end of the period of time for temporarily suspending fluid delivery.

132. (NEW) The infusion device of claim 128, wherein after the period of time for temporarily suspending fluid delivery by the infusion device has transpired the infusion device resumes fluid delivery.

133. (NEW) The infusion device of claim 123, wherein the at least two suspend functions include a block function for suspending delivery of the fluid after a potentially harmful amount of fluid is requested by a user and a warning to the user of the potentially harmful amount of fluid.

134. (NEW) The infusion device of claim 133, wherein the potentially harmful amount of fluid is a bolus.

135. (NEW) The infusion device of claim 133, wherein the potentially harmful amount of fluid is a bolus requested too soon after a previous bolus is delivered.

136. (NEW) The infusion device of claim 133, wherein the potentially harmful amount of fluid is too low a total fluid dose for the day.

137. (NEW) The infusion device of claim 133, wherein the block function is triggered after a fluid measurement integrated over an integration period exceeds a target value.

138. (NEW) The infusion device of claim 137, wherein the block function is alternately triggered because a second fluid measurement integrated over a simultaneous and overlapping integration period exceeds the target value.

139. (NEW) The infusion device of claim 137, wherein the integration period is subdivided into a plurality of subperiods and each of the plurality of subperiods is associated with a subtotal representing the fluid delivered and an oldest subtotal of the subperiods is replaced by a newest subtotal of the subperiods.